

Sub B1

21. A process for detecting the presence of a nucleoside triphosphate in a sample, comprising a step of detecting the phosphorylation of a nucleoside diphosphate kinase (NDPK) to the phosphoenzyme form by detecting a change in a characteristic of the NDPK which differs between its phosphorylated and unphosphorylated forms.

22. The process of claim 20 or claim 21, wherein the phosphorylation or dephosphorylation is detected by using an intrinsic property of NDPK.

23. The process of claim 20 or claim 21, wherein the NDPK is modified to carry a label which gives a different detectable signal when the enzyme is phosphorylated from when it is unphosphorylated.

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24. The process of claim 23, wherein the NDPK carries a fluorescent label.

25. The process of claim 24, wherein the fluorescent label is attached to the NDPK via a cysteine residue.

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26. The process of claim 24, wherein the fluorescent label is IDCC (N-[2-(iodoacetamido)ethyl]-7-diethylaminocoumarin-3-carboxamide).

27. The process of claim 20, wherein the nucleoside diphosphate is ADP or GDP.

28. The process of claim 21, wherein the nucleoside triphosphate is ATP or GTP.

29. The process of claim 20 or claim 21, being a quantitative process.

30. The process of claim 20 or claim 21, wherein the NDPK is the NDPK of *Myxococcus xanthus* carrying a Asp112-Cys mutation, and carrying an IDCC label at this mutated residue.

31. NDPK is modified to carry a label which gives a different detectable signal when the enzyme is phosphorylated from when it is unphosphorylated.

32. The NDPK of claim 31, wherein the label on the modified NDPK is a fluorescent label.

33. The NDPK of claim 32, wherein the fluorescent label is attached to the NDPK via a cysteine residue.

34. The NDPK of claim 32 or claim 33, wherein the fluorescent label is IDCC.

35. NDPK of *Myxococcus xanthus* carrying a Asp112-Cys mutation, and carrying an IDCC label at this mutated residue.

36. NDPK modified by the attachment of at least one detectable label that is sensitive to the binding of a nucleoside diphosphate.

37. A substrate having the NDPK of any one of claims 31, 35 or 36 immobilised thereto.

38. The NDPK of any one of claims 31, 35 or 36 for use as an *in vivo* or *in vitro* diagnostic reagent.